

AA

CorR to DE 19936547



Office d' la Propriété
Intellectuelle
du Canada
Un organisme
d'Industrie Canada

Canadian
Intellectual Property
Office
An agency of
Industry Canada

CA 2387122 A1 2001/02/15

(21) 2 387 122

(12) DEMANDE DE BREVET CANADIEN
CANADIAN PATENT APPLICATION

(13) A1

(86) Date de dépôt PCT/PCT Filing Date: 2000/07/31
(87) Date publication PCT/PCT Publication Date: 2001/02/15
(85) Entrée phase nationale/National Entry: 2002/02/01
(86) N° demande PCT/PCT Application No.: EP 2000/007383
(87) N° publication PCT/PCT Publication No.: 2001/010855
(30) Priorité/Priority: 1999/08/04 (199 36 547.4) DE

(51) Cl.Int.⁷/Int.Cl.⁷ C07D 301/12

(71) Demandeur/Applicant:
BASF AKTIENGESELLSCHAFT, DE

(72) Inventeurs/Inventors:
TELES, JOAQUIM HENRIQUE, DE;
REHFINGER, ALWIN, DE;
BASSLER, PETER, DE;
RIEBER, NORBERT, DE;
WENZEL, ANNE, DE;
WALCH, ANDREAS, DE;
HARDER, WOLFGANG, DE
(74) Agent: BORDEN LADNER GERVAIS LLP

(54) Titre : PROCEDE POUR FAIRE REAGIR UN COMPOSE ORGANIQUE AVEC UN HYDROPEROXYDE
(54) Title: METHOD FOR REACTING AN ORGANIC COMPOUND WITH A HYDROPEROXIDE

(57) Abrégé/Abstract:

The invention concerns a method for reacting an organic compound with a hydroperoxide using at least a heterogeneous catalyst. Said method is characterised in that the pH and the temperature of the reaction medium are modified during the reaction.

Canada

<http://opic.gc.ca> · Ottawa-Hull K1A 0C9 · <http://cipo.gc.ca>

OPIC · CIPO 191

OPIC CIPO

Reaction of an organic compound with a hydroperoxide

Abstract

In a process for reacting an organic compound with a hydroperoxide using at least one heterogeneous catalyst, both the pH and the temperature of the reaction medium are changed during the reaction.

We claim:

1. A process for reacting an organic compound with a hydroperoxide using at least one heterogeneous catalyst, wherein both the pH and the temperature of the reaction medium are changed during the reaction.
5
2. A process as claimed in claim 1, wherein a hydroperoxide solution is added continuously to the reaction medium.
- 10 3. A process as claimed in claim 2, wherein the change in the pH of the reaction medium is achieved by changing the pH of the hydroperoxide solution which is added to the reaction medium.
- 15 4. A process as claimed in any of claims 1 to 3, which comprises at least the steps (i) to (iii):
 - (i) reacting the hydroperoxide with the organic compound to give a mixture comprising the reacted organic compound and unreacted hydroperoxide,
 - 20 (ii) separating the unreacted hydroperoxide from the mixture resulting from step (i),
 - (iii) reacting the hydroperoxide which has been separated off in step (ii) with the organic compound,
- 25 where the reactions in steps (i) and (iii) are carried out in at least two separate reactors and both the pH and the temperature of the reaction medium are changed in at least one of the reactors used in steps (i) and (iii).
- 30 5. A process as claimed in any of claims 2 to 4, wherein the pH of the hydroperoxide solution is changed

- (a) by treatment of the hydroperoxide solution with at least one ion exchanger
or
- (b) by addition of
- (aa) an acidic salt or
- 5 (bb) a basic salt or
- (cc) a neutral compound or
- (dd) a mixture of two or more thereof
to the hydroperoxide solution or
- (c) by a combination of methods (a) and (b).
- 10 6. A process as claimed in any of claims 2 to 5, wherein the hydroperoxide solution is an aqueous hydrogen peroxide solution.
7. A process as claimed in any of claims 1 to 6, wherein the heterogeneous catalyst comprises a titanium-containing zeolite.
- 15 8. A process as claimed in any of claims 1 to 7, wherein the organic compound contains at least one C-C double bond.
- 20 9. A process as claimed in any of claims 1 to 8, wherein the pH of the reaction medium is reduced during the reaction.
10. A process as claimed in any of claims 1 to 9, wherein not only the temperature and pH of the reaction medium but also the pressure under
25 which the reaction is carried out is changed.

Fig. 1

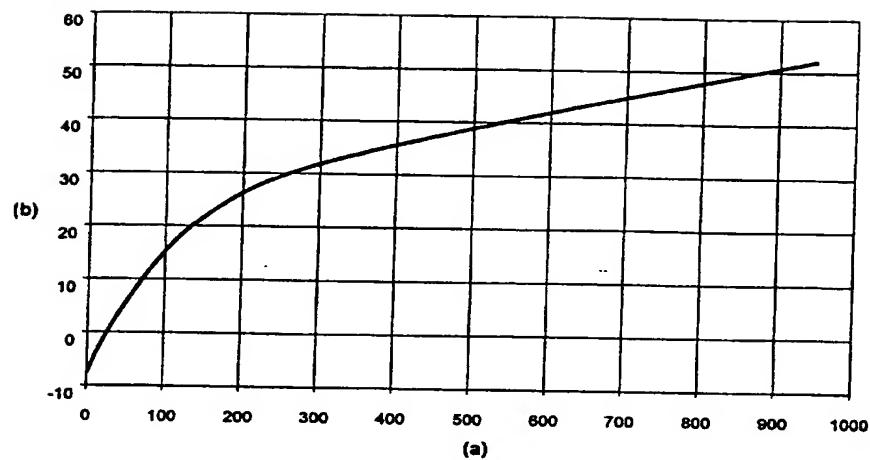


Fig. 2

